# The Center

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## New Product Extends Shelf Life of Cut Fruit

Mantrose-Haeuser, Inc. has begun marketing the product "NatureSeal" which extends freshness and shelf-life in cut fruits. The product was developed as a result of a Cooperative Research and Development Agreement (CRADA) between ARS and Mantrose. Mantrose has also licensed the technology from USDA.

Mantrose is marketing NatureSeal products for an entire line of treatments for fresh cut fruits and vegetables; however the work at the Western Regional Research Center (WRRC) focused on developing an edible-surface treatment for apples and pears. The research was conducted in the laboratory of Attila Pavlath and Dominic Wong. Employees of Mantrose also collaborated on the project.

**Fresh-Cut apples and pears protected by NatureSeal.**

*[This photograph cannot be used or reproduced without written permission of Mantrose-Haeuser, Inc.]*

NatureSeal for apples and pears is a precise blend of vitamins and minerals which are Generally Recognized As Safe (GRAS). It is applied by spraying or dipping and does not impart any taste, color or odor.

Cut apples and pears with NatureSeal stay fresh for up to 3 weeks without browning or loosing taste or texture. This technology will help extend the market for these fruits as convenience foods, in food service, in salad bars and in supermarkets. NatureSeal apple slices are already being sold in Wa-Wa stores in the Midwest and offered in the school lunch program. The cut apples will be sold in U.S. supermarkets later this year.

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The Center is a quarterly newsletter compiled by WRRC to alert potential partners of technology transfer opportunities.

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## WRRC Patent Activity

February - May 2000

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### U.S. Patents Issued:

February 22, 2000; No. 6,027,758
*Restructured Fruit and Vegetable Products and Processing Methods*
Inventors: T. McHugh, C. Huxsoll

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### U.S. Provisional Patent Applications Filed:

February 1, 2000; Serial No. 60/179,589
*Intermediate-moisture Formed Food Products Made from Partially Dehydrated Fruit and/or Vegetables and Novel Methods of Packing Thereof*
Inventors: C. Huxsoll, T. McHugh, D. Olson

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### How Do Businesses Get Access to These Technologies

WRRC is seeking private companies interested in licensing technologies which have been patented or for which a patent application has been filed. We are also looking for companies interested in becoming our partners in Cooperative Research and Development Agreements (CRADAs). CRADA partners have the first right to negotiate an exclusive license for each invention which is made as part of the CRADA. We encourage small and minority-owned business to take part in our technology transfer programs.

## CRADA Opportunities: Food Safety

The Food Safety and Health Unit (FSH) of WRRC conducts interdisciplinary research on food safety. The Unit has expertise in environmental science, animal and plant microbiology, analytical chemistry, biochemistry, plant pathology, and molecular biology. The specific research interests of FSH include: development of effective methods to capture pathogens from complex environments, including the air; development of more effective methods for culture, detection and identification of human foodborne pathogens (e.g., Campylobacter, E. coli, Listeria, and Salmonella); mass spectrometry methods for identification of bacterial species and strain differences; the ecology and biology of pathogens; development and testing of innovative intervention strategies to minimize pathogen contamination on poultry, fresh, produce and in manure; development of biosensors; and biocontrol of human pathogens on plants.

We are seeking industry partners interested in Cooperative Research and Development Agreements (CRADA) opportunities with the FSH Unit in the following areas: (1) innovative methods for minimizing pathogens in poultry or fresh produce; (2) development of effective sampling methods for concentrating bacteria from environmental samples, including plants, soil and air; (3) development of sensitive, quick, biosensors for specific identification of bacterial pathogens in environmental samples; techniques for identification of bacterial pathogens by mass spectrometry; and (4) comparative genomics of human foodborne pathogenic bacteria and natural plant bacteria to identify potential targets for intervention strategies.

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## Symposium and Open House
## "Meeting 21st Century Challenges Through Agricultural Research"
## September 8, 2000 --- 9:00 am - 4:00 pm

You will be receiving an invitation to the symposium and open house shortly. We have an excellent program planned including confirmed keynote addresses by Mary Clutter, Assistant Director, Biological Sciences, National Science Foundation; Larry Vanderhoef, Chancellor, University of California, Davis and Ted Batkin, Director of the California Commodity Commission. There will also be a panel of WRRC scientists highlighting our research program. The afternoonwill include an open poster session, tours and exhibits. If you do not receive an invitation by June 1, 2000 and would like to attend please contact: Monta Whitehurst, (510) 559-5600 or mbw@pw.usda.gov.

We look forward to seeing you on September 8!